

Algebra Radicals Quiz REVIEW

Simplify.

1. $\sqrt{120} = 2\sqrt{30}$

2. $\sqrt[3]{250} = 5\sqrt[3]{2}$

3. $3\sqrt{144a^3b^6} = 36ab^3\sqrt{a}$

4. $-5\sqrt[3]{108x^{12}y^3z} = -15x^4y\sqrt[3]{4z}$

5. $3\sqrt{2} \cdot \sqrt{8} = 12$

6. $\frac{6\sqrt{81}}{\sqrt{9}} = 18$

7. $8\sqrt{20} - 2\sqrt{45} + 6\sqrt{5}$
 $16\sqrt{5} - 6\sqrt{5} + 6\sqrt{5}$
 $\boxed{16\sqrt{5}}$

8. $2\sqrt{2}(5\sqrt{27} - 4\sqrt{3})$
 $10\sqrt{54} - 8\sqrt{6}$
 $30\sqrt{6} - 8\sqrt{6}$
 $\boxed{22\sqrt{6}}$

9. $8 \cdot \frac{4\sqrt{40}}{2\sqrt{7}}$
 $\frac{8}{1} \cdot \frac{4\sqrt{70}}{7} = \boxed{\frac{32\sqrt{70}}{7}}$

10. $\sqrt{\frac{81}{3}} = 3\sqrt{3}$

11. $\frac{\sqrt{5}}{\sqrt{3}} \cdot \frac{\sqrt{12}}{\sqrt{20}} = 1$

12. $2 \cdot \frac{3\sqrt{2}}{\sqrt{10}}$

$\frac{2}{1} \cdot \frac{3\sqrt{5}}{5} = \boxed{\frac{6\sqrt{5}}{5}}$

13. $3\sqrt{2} \cdot \sqrt{32} \cdot 2\sqrt{9}$
 $6\sqrt{36} = 144$